

Information Publication No

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 B01D29/11 B01D29/21

#### B. FIELDS SEARCHED

IPC 7 B01D

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

### C. DOCUMENTS CONSIDERED TO BE RELEVANT

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

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# INTERNATIONAL SEARCH REPORT

International Application No.

PCT/EP 03/06911

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 199 19 289 A (MAHLE FILTERSYSTEME GMBH) 2 November 2000 (2000-11-02) the whole document ----	1
A	GB 1 327 382 A (FRAM EUROP) 22 August 1973 (1973-08-22) page 2, column 2; figures -----	1

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/06911

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5230760	A	27-07-1993	JP 3144858 B2 JP 5154361 A	12-03-2001 22-06-1993
US 4536291	A	20-08-1985	DE 3318940 A1 FR 2546415 A1 GB 2140317 A , B JP 59230612 A	29-11-1984 30-11-1984 28-11-1984 25-12-1984
EP 0062867	A	20-10-1982	AT 30299 T AU 8254782 A BR 8202104 A CA 1180287 A1 DE 3277497 D1 DK 165482 A , B, EP 0062867 A2 ES 8304442 A1 FI 821289 A JP 1592499 C JP 2018125 B JP 58014919 A	15-11-1987 21-10-1982 22-03-1983 01-01-1985 26-11-1987 15-10-1982 20-10-1982 01-06-1983 15-10-1982 14-12-1990 24-04-1990 28-01-1983
DE 19919289	A	02-11-2000	DE 19919289 A1	02-11-2000
GB 1327382	A	22-08-1973	BE 757121 A1 DE 2048891 A1 FR 2065034 A5 ZA 7006807 A	16-03-1971 22-04-1971 23-07-1971 29-09-1971